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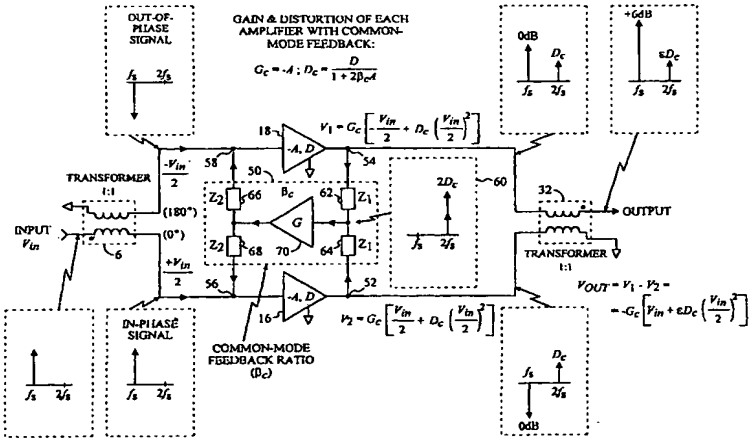
(54) Title: EVEN ORDER DISTORTION ELIMINATION IN PUSH-PULL OR DIFFERENTIAL AMPLIFIERS AND CIRCUITS



(57) Abstract: A method for improving or eliminating second harmonic and higher even order distortion terms and balance of fundamental signals in push-pull amplifiers and other differential circuits is disclosed. A common-mode (CM) signal is generated as a sum of two complementary (out of phase) signals in a summation network (32). The CM signal contains even order distortion terms only, while the fundamental signal and odd order distortion terms are canceled, thus providing a correction signal that can be used to reduce even order distortion terms, by injecting the correction signal, with proper phase and amplitude, into suitable circuit nodes. For feedback (70), the correction signal is injected at the input (56, 58) of the amplifiers (16, 18), for feed-forward, it's injected at the output. The correction signal can be amplified to higher levels and injected into the circuit, without affecting gain of fundamental signals; and can result in significant even order distortion improvements, and improved balance of complementary fundamental signals.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :H03F 1/26

US CL :330/69, 107, 109, 149, 301

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 330/69, 107, 109, 149, 301

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

IEEE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

amplifier and distortion

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,041,235 A (KILBARGER) 20 August 1991 (20,08.1991), see entire document.	1-42

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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